

Supervisor's statement for the PhD thesis Drivers of karyotype evolution in Lepidoptera

by Mgr. Irena Provazníková

Irenka was my first student ever and she is also my first PhD student to defend her thesis. As such, she suffered a lot from my lack of experience in managing both scientific projects and human resources. Her project should have been focused on adaptive value of chromosome inversions previously reported in two sister *Yponomeuta* ermine moths. She indeed contributed greatly to our research of the ermine moths as she participated in our first attempts for genome and transcriptome sequencing and lead physical mapping of selected chromosomes using the available *Y. evonymella* BAC library. She became very independent and established her own collaborations such as with prof. Wahlberg (Lund University, Sweden) who hosted her twice in his lab. There, Irenka reconstructed phylogeny of *Yponomeuta* spp. using multigene and ddRAD approach and eventually showed that species we were studying are not sister species at all and the inversions therefore have nothing to do with their ecological speciation. Of course, this was not a result I hoped for and it practically ended my interest in these inversions.

So, Irenka focused on the *Yponomeuta* neo-sex chromosomes and further developed several other projects stemming from her previous research of distribution of selected gene families. Furthermore, she co-authored several other papers on her own, which evidences her good-hearted and cooperative nature. It should be highlighted that not all of Irenka's projects has been published or included in the present thesis and I hope we will be able to eventually finish those as well. Irenka mastered wide range of methodologies including various FISH modifications, imunostaining and bioinformatics. She also proved to be a great mentor to undergraduate students and participated in scientific outreach. At some point she finished all wet lab work and moved to EMBL in Heidelberg where she has been working on non-academic position ever since. It has taken us long time to write up and I am the one to blame. Despite her new work, Irenka was able to do her part and sent me her drafts always in time. Unfortunately those were then collecting dust on my table as there were always other things to do. Fortunately, she kept nagging me first with manuscripts and later with her thesis for which I am very grateful.

Finally, we are here today and it is my great pleasure to recommend you Irenka's thesis for defense. Her work laid the foundation for my current research of neo-sex chromosomes and karyotype evolution and I would like to thank Irenka for all her work, help and patience. I think I am speaking for the entire crew when I say that you left a deep impression on both our hearts and minds.

17th February 2023 in České Budějovice,

Petr Nguyen
(mentor)